

ABSTRACT

A new system and method is described, utilizing a scheduler based on a transmission time calculation and prioritizing algorithm. The system utilizes a Schedule Information Vector (SIV) protocol for saving power in wireless local area networks. The system comprises an access point having a priority queue, one or more stations, an SIV frame comprising an association ID for identifying one of the stations and a scheduled wake-up time for the identified station. An algorithm is employed for calculating the transmission time of downlink data for the stations. The access point originates and transmits to the one or more stations the SIV frame of the scheduled wake-up times. The current data to be transmitted to each station is accessed by the algorithm to determine the total transmission time to each station. A priority queue in the access point is ordered from the shortest to the longest transmission, assigning the highest priority to the shortest power save transmission to minimize the total power consumption of the network.

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